ESTABLISHED 1913
TWICE WEEKLY

The Metal Bulletin

SINGLE COPIES 1s. 9d each

Proprietors and Publishers: METAL INFORMATION BUREAU LTD.
Managing Editor: F. B. RICE-OXLEY, M.A. Joint Editors: L. H. TARRING, H. G. CORDERO.
Published at BIRKETT HOUSE, 27, ALBEMARLE STREET, LONDON, W.1. Tel.: HYDE PARK 5805 (five lines).
Telegrams: Quinirage, Piccy, London. *Cables*: Ironage, London.
Annual Subscription:—Anywhere £7 by ordinary mail. Air Mail charges according to destination.

TUESDAYS AND FRIDAYS | TUESDAY, JULY 28th, 1953 | No. 3813

Steel Industry Progress in Eastern Germany

As is now well known, Eastern Germany is aiming to produce by 1955—the end of the Five-Year-Plan—two million tons of pig iron, over 3.1 million tons of steel ingots and 2.2 million tons of rolling mill products. To achieve this, existing works are being enlarged and modernised, dismantled works reconstructed and expanded beyond their former size, and big new projects launched. A good deal of information—much of it conflicting and some of it tainted perhaps by propaganda from one side or another—has become available recently. In the following pages we have endeavoured to give some idea of the progress made by the East German steel industry in the past few years.*

Imports of High Grade Ore Necessary

By 1955 it is intended to raise the output of domestic iron ore to 1,800,000 tons per annum, but Eastern Germany will continue to be heavily dependent upon imports of high grade ore, her own ores averaging only about 30 per cent. Fe. According to one source iron ore production rose from 386,000 tons in 1950 to 852,000 tons in 1952, while the target for this year is set at 1,080,000 tons. During 1952 some 246,000 tons of iron ore were imported from the Soviet Union and 72,000 tons from Sweden. Imports aimed at from these two countries this year are 320,000 tons and 84,000 tons respectively.

Rising Pig Iron Production

Pig iron production in the past two years and the target for the current year are as follows:

	Output 1951	1952	*Plan* 1953
	(1,000 tons)		
Thomas	285	390	365
Foundry	67	99	188
*Stahleisen** and Spiegeleisen ...	50	84	247
Total	402	573	800

* *open hearth pig iron.*

The 1952 output figure, according to the *Berliner Wirtschaftsblatt*, was 52,000 tons below the target.

The production of pig iron by individual works was as follows:

	Output 1951	1952	*Plan* 1953
	(1,000 tons)		
Maxhütte			
Thomas	285	328	365
Foundry	65	18	—
Stahleisen and Spiegeleisen ...	13	8	—
Total	365	354	365
Eisenhüttenkombinat J. W. Stalin			
Thomas	—	62	—
Stahleisen and Spiegeleisen ...	37	76	247
	37	138	247
Eisenhüttenwerk West			
Foundry	2	81	188

In 1952 it is reported that 293,000 tons of steelmaking pig iron were imported from the U.S.S.R., 81,000 tons from Sweden and not exactly known quantities from Western Germany.

Scrap Shortage

The scrap position in Eastern Germany was favourable up to the beginning of 1950, and exports were made. During that year, however, with rising steel production, the position deteriorated. The steel scrap production in 1952 showed a decline over 1951. In 1951 it was planned to raise 1,100,000 tons, but only 1,010,000 tons were realised, and in 1952, where the plan asked for 950,000 tons, only 866,000 tons were realised. In cast iron scrap, too, the position was much the same. Output in 1952 was 368,000 tons against 406,000 tons in 1951.

Development of Iron and Steel Output

Production in 1936 *and from* 1945 *to* 1952
(*All works*)

	Year	*Output in 1,000 tons*	*Percentage (1936=100)*
Pig Iron	1936	201	100
	1946	123	61
	1947	132	66
	1948	274	136
	1949	313	156
	1950	348	173
	1951	402	200
	1952	573	285

* *all tonnages are metric.*

Raw Steel (Ingots) ...	1936	1,200	100
	1946	97	8
	1947	108	9
	1948	398	33
	1949	643	54
	1950	963	80
	1951	1,537	128
	1952	1,808	151
Rolled Steel ...	1936	898	100
	1946	76	8
	1947	92	10
	1948	192	21
	1949	468	52
	1950	872	97
	1951	1,084	121
	1952	1,323	148

Production of Rolled Products
(1,000 tons)

	Output		Plan	
	1950	1951	1952	1955
Hot rolled Steel	872.4	1,083.7	1,400*	2,200
of which:				
Semis	82.6	109.4	140	250
Rails (all types)	23.2	31.7	106	225
Seamless Tubes	13.2	18.3	28	60
Wheel Tyres...	24.6	27.4	25	75
Heavy Plates ...	128.5	182.5	200†	260
Medium Plates	58.3	74.8	75†	95
Sheets	72.4	105.1	120†	160
Cold Rolled Steel	18.7	21.8	32	60

* Output in 1952 was 1,323,000 tons.
† Output was 384,000 tons.

It has been estimated that about 60 per cent. of rolled steel production is despatched to Russia as reparations.

A review of the principal works (excluding Soviet-controlled concerns) follows:

Eisenhüttenkombinat J. W. Stalin

According to the *Berliner Wirtschaftsblatt* this name was conferred upon the former Eisenhüttenkombinat Ost (EKO) on 8th May this year. Construction of this works, which is not yet complete, was started at the beginning of January, 1951, and is situated at Fürstenberg/Oder. For its iron ore and coke supplies it depends entirely upon deliveries from the Eastern Communist countries. The first blast furnace was blown in on 19th September, 1951, the second in January, 1952, the third in August and the fourth in November of the same year. The daily output capacities of these stacks is said to range between 500 and 1,000 tons, but it is reported that the average production from the first three furnaces last year was about 460 tons; after the construction of a sinter plant the production rate is expected to be raised this year. Two or even four more blast furnaces may be built. By 1955 annual pig iron capacity is expected to be 600,000 tons, and a figure of 900,000 tons at a later date has been mentioned.

The steelworks and rolling mills are still under construction, but steel production is expected to begin this year. There will be ten 50-ton open hearth furnaces producing about 450,000 tons of raw steel annually. The building of Talbot furnaces, basic Bessemer converters and electric furnaces has been reported as planned. Originally it was announced that the works would produce semis, heavy sections, plates and sheets, but now it seems that the rolling mill programme is to comprise only plates and sheets. A heavy plate mill for the works is being built by the Abus-Schwermaschinenbau "Heinrich Rau" at Wildau.

Maximilianshütte (Maxhütte)

This was the only iron smelting plant left to Eastern Germany after the war. It has four blast furnaces; three are of 360 cbm. each (daily capacity about 450 tons) and one of 285 cbm. (about 400 tons). To replace hand charging a skip hoist is to be built and in 1953/4 the smallest furnace is to be enlarged to 400 to 500 cbm. capacity. At the end of 1951 a Dwight-Lloyd band for sintering the lean domestic ores was installed. When the modernisation of the blast furnace plant is completed only Thomas pig iron will be produced.

In the steelworks there are four 15-ton basic Bessemer converters and two 25-ton electric steel furnaces. Larger converters — up to 25-ton—are planned, as well as a 1,000-ton mixer, while a plant for the oxygen enrichment of the converter blast is nearing completion. The six mills include a 1,000 mm. cogging mill, a 950 mm. 2-high mill and a 700 mm. 3-high mill. A wide strip mill is planned. The pressing and forging plant, with an annual capacity of 17,000 tons, is to be modernised next year.

Stahl- und Walzwerk Brandenburg

Some eight 100-ton open hearth furnaces are operating here and four more are planned. The rolling mill construction has not kept pace with the steelworks building and at present only slabs are rolled. Ingots and slabs in the following qualities are despatched to the mills at Hettstedt, Ilsenburg, Kirchmöser, Thale and the Maxhütte: St. 37.12, MSt. 3, St.-CK 12, 42 and 60 as well as dynamo and deep drawing grades. Various mills are planned for Brandenburg, including a blooming, a sheet bar, and plate and sheet mills. When completed it will be the largest rolling mill plant in Eastern Germany, producing about 420,000 tons of products a year.

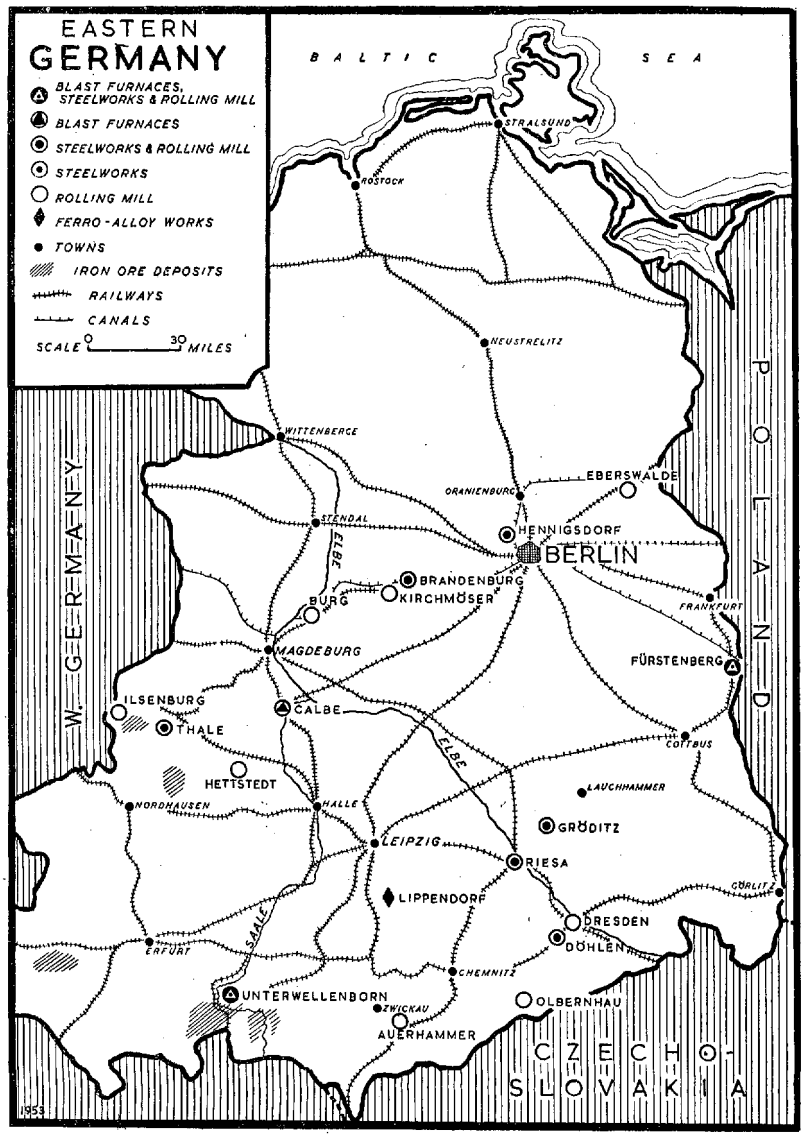
An ingot mould foundry with an annual capacity of 24,000 tons is nearing completion.

Stahl- und Walzwerk "Wilhelm Florin" (Henningsdorf)

In the steel melting shop there are four 100-ton open hearths. No expansion is envisaged. Chief qualities produced are MSt. 3, St.CK 42 and St.CK 60 as well as chrome nickel alloy steels. The steel foundry has two 15-ton electric furnaces and a 40-ton open hearth. Three more electric furnaces are contemplated. There are seven rolling trains installed, not all of which are at any one time in operation, including a 750 mm. 3-high blooming mill, a two-stand 650 mm. blooming mill, a 350 mm. quarto mill, a 450 medium mill and a 280 mm. wire rod mill (5-16 mm. diameter products).

Stahl- und Walzwerk Riesa

In the melting shop there are five 100-ton open hearth furnaces. In the steel foundry there are six 60-ton and one 25-ton open hearths and two 15-ton electric furnaces. Rolling mill equipment comprises a 800 mm. reversing blooming mill, a 650 mm. roughing, a 500 mm. 3-stand mill, a wide strip mill, a 360 mm. light products mill and a 280 mm. mill, as well as a seamless tube plant and butt welding equipment. A mill with sizing and smoothing rolls is also installed.



Edelstahlwerk Döhlen

This has been greatly expanded from its pre-war importance. Two open hearths, two 10-ton and one 3.5-ton electric furnaces are operating. Production of 120,000 tons of electric steel and 80,000 tons of open hearth are planned for 1955.

Czechoslovakia is to deliver a 1,100 mm. blooming*, an 850 mm. 3-high mill, a 360 mm. light mill and a wire mill by the end of this year. Heat treatment and drawing facilities are planned, and it is hoped to get a heavy forge from Western Germany.

* *Another report states that a blooming mill is being built by an East German concern.*

Eisenwerk West (Calbe)

Ten low shaft furnaces, utilising low grade fuel and domestic iron ore, are already operating at this plant, whose construction began in 1951. Ten more low shaft furnaces are under construction. An output of 250,000 tons of foundry pig iron is planned by 1955. Coke from Zwickau and brown coal coke from the new plant at Lauchhammer are used as fuel.

* * *

There are several other steelworks and a number of re-rolling plants, details of which are included in the table overleaf giving steel production and the rolling programmes of all the East German works:

Sources: *"Berliner Wirtschaftsblatt"*; *"Stahl und Eisen"*; *"Tägliche Rundschau"*.

Steel Ingot Output
(1,000 tons)

Works	1951 Thomas	1951 Open Hearth	1951 Electric	1952 Thomas	1952 Open Hearth	1952 Electric	Products
Eisenhüttenkombinat J. W. Stalin (Fürstenberg) ...	—	—	—	—	—	—	Pig iron.
Maximilianshütte (Unterwellenborn)	218	—	46.8	331	—	52	Spiegeleisen, foundry and Thomas pig iron, *Stahleisen*, blooms, billets, sheet bars, standard and light rails, fishplates, tees, channels, angles, special waggon building sections, rounds, free-form forgings, high grade steel.
Stahl- und Walzwerk Brandenburg	—	482	—	—	532	—	Ingots, slabs.
Stahl- und Walzwerk "Wilhelm Florin" (Hennigsdorf) ...	—	176	—	—	196	—	Billets, squares and rounds, wide flats, wire rods, spring steel, high grade steels.
Stahl- und Walzwerk Riesa ...	—	318	—	—	342	—	Tees, channels, angles, rounds and squares, wide flats, seamless tubes, welded gas tubes, high grade steel castings.
Edelstahlwerk Döhlen ...	—	46	22.9	—	48	49	High grade steel.
Eisenhüttenwerk West (Calbe)	—	—	—	—	—	—	Foundry pig iron.
Stahl- und Walzwerk Gröditz	—	52	—	—	87	—	Wheel tyres and centres, free-form forgings.
*Eisenhüttenwerk Thale ...	—	147	27.1	—	130	41	Sheets (electrical, transformer, dynamo and deep drawing grades).
Halbzeugwerk Auerhammer (Aue)	No steel making facilities.						Heavy and medium plates.
Walzwerk "Willy Becker" (Kirchmöser)							Rounds, squares, hexagons, wire rods, spring steel, heavy plates.
*Walzwerk für Buntmetall "Kupfer und Messingwerke" (Hettstedt)							Heavy and medium plates, wire rods.
Walzwerk Burg (Burg, near Magdeburg)							Rounds, sheets.
Walzwerk Dresden-Friedrichstadt							Rounds, hexagons, wide flats.
Walzwerk Finow (Eberswalde)							Rounds, squares, hexagons, wide flats.
Blechwalzwerk Olbernhau ...							Medium plates and sheets (including dynamo and transformer grades).
Kupfer und Blechwalzwerk "Michael Niederkirchener" (Ilsenburg)							Heavy plates.

* *SAG-Betriebe (Soviet-controlled concerns).*

[Several other finishing plants have been mentioned. They are a strip works at Rostock making strip for the Mecklenburg agricultural machinery industry, a cold rolled strip works at Oranienburg, a small rolling plant in Berlin, and a tube and cold rolling mill at Chemnitz, but satisfactory details are lacking.—Ed., THE METAL BULLETIN.]